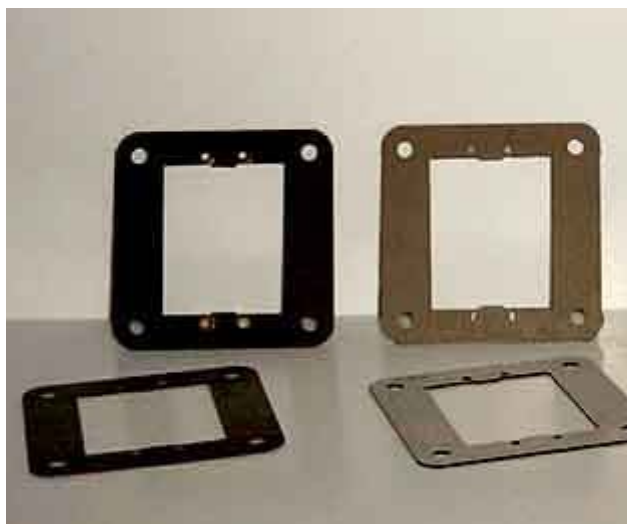


It is possible to repair the ribbons.

Repairing the ribbon assembly takes skill and probably a few trials. Here is how to go about it. If you are not handy and wish to order new ribbons, just go to [Howard Dawson's Page](#).

1. Split the frame into 2 layers. Do this very carefully so you will not break a section. If this is not possible you have to have duplicates made.

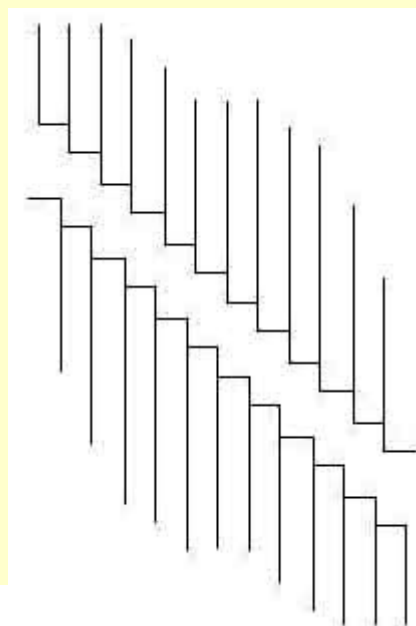


On the left the old frames. On the right new frames made by Hugh Salt in his Amsterdam workshop.

2. Take out the old ribbons. Keep the ends to which you have to solder or glue the new ribbons. Clean the ends carefully.

3. Make 2 molds of thin carton, the gray kind you find at the back of a writing pad can be useful. Cut out with a sharp knife (a Japanese paper knife) pieces of carton of about 4 by 4 cm. You glue these together in such a way that you get a sort of staircase with steps of about. Make two of these and make them as long as the length of the ribbon you are going to need which is about 28 steps.

4. Carefully cut from aluminum foil 2 long strips. The width of the strips has to be the same as that of the old ribbon. If you do not succeed the first time, just try again, and again. It is always handy to make more strips so you can get experience in repairing the tweeters.



5. Carefully put this long strip on one of the molds (matrixes) and very slowly put on the other mold beginning at one side. Try again and again until you have an aluminum accordion with the steps perpendicular to the long side.

6. Now comes the difficult part: the metal connecting part (which you have saved from the old ribbon) has to be glued or soldered to one end of the ribbon. Put this one end in the frame and see (measure) how long the ribbon has to be. Without being stretched it has to be a little shorter than the distance between the top and bottom inside the frames.

7. Glue or solder the other end of the ribbon to the other connecting part. The soldering should be very well done without damaging the ribbon. Furthermore the connection should be conductive otherwise the ribbon does not work. Remember it is the coil and the diaphragm at the same time.

8. Now you can put the ribbon in between the frames. You have to glue the frames together with a glue which permits you to open the frames again later.

You will find out that it is not easy to do this repair. And you probably have to try several times. Do not despair. If you yourself are not handy or technical, you can ask a workshop to do it for you.

Take the thinnest aluminum foil that you can get. And if it is too difficult to handle, take a less fragile kind. Depending on the thickness of the aluminum the impedance can differ. I remember that there is a difference between the 16 Ohm and 8 Ohm ribbons. But I would not be troubled about this information. The impedance on both sides of the transformer is more important. Since my ribbons did not have enough efficiency a friend of mine made new contacts in the transformer so that the impedance on the side to be connected to the amplifier is now 4 Ohms and the efficiency is now 91 dB instead of 87/88 dB. If you do not succeed you always can search with Google and try to find a manufacturer in England who sells ready replacements. Good luck.

